

in occupations requiring the recognition of colored signal lights was found to occur in about 3.1 of men and 0.7 per cent. of women. Among refractive conditions of the eye, color blindness occurs least frequently in eyes apparently without demonstrable refractive error; it occurs most frequently in eyes showing mixed astigmatism.

The examinations were made as a part of other studies of the effect of illumination on vision conducted as a part of an illumination survey of the Federal department buildings in Washington, D. C. One thousand persons were tested with the Edridge-Green lantern to determine both the value of the lantern and the effect, if any, of refractive conditions, lesions, and anomalies of the eye, and also of sex, upon different degrees of color perception.

A special study of the Jennings self-recording worsted test was also made, fifty persons being tested with this and other tests. The results with the Jennings test were found to be too inaccurate for most work, although it was found to be superior to other tests in certain lines of work where great accuracy and the classification of color defects were not essential.

UNIVERSAL SERVICE.

Every patriotic American believes today in universal service as a war measure. This, in the broad sense, simply means complete and efficient organization and mobilization for war of all the resources of the country, both human and material. It means "work or fight" for men in draft age. It means suppression of non-essential activities of all sorts. It means for each man and woman to get the maximum physical efficiency personally. It means a conscious development of individual patriotism. It means intelligent and constructive study of our personal and national ideals. It means scrutiny of national problems and policies. It means informed interest in politics, in social activities of relief and charity, in local and general social problems of civics, morals, religion and health. It means, in short, a literal reading of the words, *universal service*, making every person contribute his utmost to himself and his fellows, in the way of physical, intellectual and moral improvement. *That* is universal service.

We all admit the excellence of this ideal of universal service in time of war. We see the necessity of it for the nation, if we are to win the war. And we see the incalculable benefit of it to the individual, if he is not to slip back into the slough of indifference, self-complacency and selfishness. Would it not be worth while to conserve these good things and have them available *after* the war as a mark of a great lesson the war has taught us. It is trite to point to the dangers to our body politic and to the average individual American, from the prosperity, easy living and self-centered round of peace times. Why not carry out of the war the great purpose and ideal of universal service, and just as it is the means whereby we shall win the war, so shall it be the

means whereby more insidious and attractive perils of peace may be averted.

As a permanent feature of American life, universal service could with advantage be made obligatory on both young men and women. The elements of discipline, obedience, study and physical development should be emphasized for both. There might well be for young women a choice of several lines embracing social work, farming, domestic science, business and other technical fields. For men, likewise, there could be a variety of subjects provided. For all, regular physical development should be required and for the men this should include intensive military training. All should be carefully instructed in their civic duties and obligations, in the history of the United States and the principles on which our government rests.

The advantages of universal service on such a broad basis as outlined, are very weighty and vastly overbalance the one objection raised, namely, that universal service would foster militarism. It has not done so in Switzerland and there is no valid reason for thinking it would do so here. It would provide a sure and wonderfully efficient means of Americanizing our foreign elements. It would disintegrate class prejudice. It would inculcate true democracy and an intelligent and stalwart patriotism. It would develop a citizenry anxious and competent to exercise the duties of citizenship. Withal it would prove a tremendous unifying, energizing force in national life. It would also be of the utmost value from the health standpoint, both personal and public, permitting early discovery and treatment of disease, and affording an exceptional opportunity for instruction in hygiene and disease prevention. By all means let us have universal service and let us make it of the fullest service in building up the highest type of American manhood and womanhood.

TUBERCULOSIS SITUATION.

Mrs. E. L. M. Tate Thompson, Director of the Bureau of Tuberculosis, State Board of Health, calls attention to the urgent need for more hospital beds in tuberculosis sanatoria. The Bureau of Tuberculosis was notified recently that 145 men were about to be discharged from Camp Kearny with pulmonary tuberculosis. San Francisco had eighteen and Los Angeles twenty-seven. This added number, coupled with the fact that many of the men now in France have members of their families that must be cared for, makes an adequate number of beds an absolute necessity. There were 1,314 men rejected in the first draft and 449 in the second. A large percentage of these men are under supervision. To date over 1,500 California men have been discharged on account of tuberculosis. This, coupled with the thousand non-resident tuberculous soldiers, makes it necessary to double our efforts. The men wish care as rapidly as they can be placed out over the State.

With our present plan, California soldiers who were discharged, will be back on the job before other States even know where their men are.

California is the only State in the Union that has a complete registration of its rejected and discharged tuberculous soldiers. No small amount of this success is due to the supervisors in nearly all of the counties in the State, and to the excellent initiative and organizing ability of the Bureau of Tuberculosis of the State Board of Health.

EDITORIAL COMMENT.

Members of the Medical Society of the State of California who have received literature from the Red Chevron Organization, requesting them to donate their services to the cause, are hereby warned that the Red Chevron was investigated at the last meeting of the Council, and the Council does not give its approval to this organization. A full discussion of the matter will occur in our next issue.

It is worth remembering that every punctured wound of the foot, especially that most frequent variety due to stepping on rusty nails, is a potential cause of tetanus. Every such wound should be treated by immediate free incision, permitting hemorrhage, then swabbed with phenol, followed by alcohol. A compress dressing should be applied which will allow access of oxygen, keep the wound open for a time and protect against further contamination. The adjacent skin should be iodined. 1500 units of tetanus antitoxin should be administered hypodermically at once. Remember that tetanus bacilli are anaerobic, spore-bearing, and most apt to occur in material contaminated with horse manure, hence especially in street dust, and that the toxin travels along the peri-neural lymph channels from wound to central nervous system.

COMFORT STATIONS.

Public accommodation is being met by some large cities in different ways. In the East, a number of the cities have constructed stations at expenditures varying from \$6,000 to \$18,000. The more expensive stations include news and boot-black stands, with a view of making them self-supporting. Other cities have used an idea suggested by the International Public Comfort Station Association: That of various merchants in the city displaying a neat little sign, designated by the city, which shows or indicates that within there is a comfort station for the accommodation of either men or women, or both. This system, so far, seems to have met with success. It saves the city a heavy expenditure for new buildings, and also benefits the merchant by material increase in business. It has been suggested that stations be located at the junction points of some of our automobile roads where traffic is very heavy, and that a sufficient amount of ground be reserved for future growth.—Bulletin, Los Angeles Health Department.

Original Articles

THE PREVENTION OF BLINDNESS WORK OF THE STATE INDUSTRIAL ACCIDENT COMMISSION.*

By WILL J. FRENCH,
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San Francisco.

The earliest reference to "Safety First" I have been able to find is in Chapter 22, verse 8, of Deuteronomy, the fifth book of Moses, where these words appear: "When thou buildest a new house, then thou shalt make a battlement for thy roof, that thou bring not blood upon thine house, if any man fall from thence."

The foundation of English common law is taken from the five books of Moses, from Genesis to Deuteronomy, and we can there read much that represents the highest ideals of present-day civilization. If they had used emery-wheels in those days, I think we would be able to read a verse following the one quoted about like this: "When thou grindest tools on the emery-wheel; then thou shalt use a hood over the wheel and goggles over thine eyes, that thou bring not blindness upon thine house because of dust entering the windows of thy soul."

The National Safety Council estimates there is one worker killed every fifteen minutes, day and night, in the United States, and one injured every sixteen seconds, day and night. This gives us more than 30,000 killed and about 2,000,000 injured. It is estimated that out of this number there are 200,000 eye injuries. The National Committee for the Prevention of Blindness states there are 100,000 blind persons in the United States and that more than 50 per cent. are needlessly blind.

There are, in round figures, 1,000,000 employees in the State of California. There are 300 industrial injuries each working day, excluding Sundays, in the State. We thus have approximately 100,000 industrial injuries each year in California. In 1914, 1915 and 1916 there were 23,451 eye injuries. Of this number 549 were permanent injuries and 22,902 temporary injuries. There were 11 cases of total blindness. The medical and compensation costs for these eye injuries will be about \$788,000. It is impossible to give a definite amount at this time, because the 11 cases of total blindness call for life pensions, and we have simply computed the amounts that would be paid the injured men, based on the mortality tables used by the insurance companies. The time lost by the 22,902 temporary injuries was 234.3 years. This means that we found just what each man lost; one man might lose a day from work, another man a week, and another man six months, and so on. We added the total together and got the 234.3 years. We have in California 26 eye injuries each working day and the number will grow larger as there is an increase in the total of employees, especially when we consider the large groups of men that are employed in the shipbuilding plants who are more

* Synopsis of address delivered on May 28, 1918, before the Section on Eye, Ear, Nose and Throat of the San Francisco County Medical Society.